

IX. *Further additions to Mr. Marshall's Catalogue of British Ichneumonidæ.* By JOHN B. BRIDGMAN.

[Read May 3rd, 1882.]

HAVING, during the past autumn and winter, had the opportunity of examining several hundred Ichneumons, it is needless to say that among so many specimens of this neglected portion of the order Hymenoptera many European species have occurred, and not only have I detected several species new to Britain, but no less than five hitherto unrepresented European genera have been added, while some few species apparently new to Science are here described. Although these additions have been made, many insects have been examined which I have been unable to name at present, more especially in the genus *Hemiteles*, which genus I believe contains less than a hundred named species, and I think I may fairly say that quite one-half of the *Hemiteles* I have seen appear to be unnamed; indeed, except Foerster's Monograph of *Pezomachus*, Thomson's treatment of the genus *Cryptus*, in his 'Opuscula,' and Taschenberg's revision of the *Cryptides*, the knowledge of this family (*Cryptides*) is but little farther advanced than it was when Gravenhorst's 'Ichneumonologia Europæa' appeared; Foerster has made an elaborate division of the genera, but unfortunately has given no idea as to the species composing his new genera. I have not, therefore, ventured to describe any new species of *Hemiteles*. I have taken several winged males which I feel quite convinced belong to the genus *Pezomachus*, but of the association of the sexes of this genus but little is known; this can only be done by breeding, and even then it is apparently but seldom that the two sexes are bred together. Two years ago I bred from a cluster of cocoons of one of the *Braconidæ* seventeen specimens of *Hemimachus fuscatus*, of which sixteen were female and one only male: last year I bred the same species from spiders' nests; there were six or seven specimens, and all were males. I also bred from another Braconid several specimens of *Pezomachus*

detritus, and all were females. The year before last Mr. Barrett sent me *P. insolens*, which he bred from *S. carpini*; all were females; whilst from another host he bred two males very like, if not a variety of, *Hemimachus instabilis*. This preponderance of one sex or the other is very unfortunate; however, I had the good fortune to find, in a box belonging to Mr. Fitch, the male and female of a bred *Pezomachus*, viz., *P. anthracinus*, the male of which is just as conspicuous amongst the known male *Pezomachi* as the female is amongst her sex.

Many of the insects I have seen have been extremely difficult to determine from the method of preparation, the majority being indiscriminately gummed down on card; many I have had to float off the mounts, examine and recard, necessitating a considerable loss of time, and sometimes some damage to the specimen. There are many Ichneumons in which it makes little or no difference if they are carded or pinned, but to recognise which method is the best for certain species or genera requires an intimate acquaintance with the distinguishing points of the insects; it is safer to pin them all, using a fairly long pin, and push the insect about half-way up the pin, and, if the wings can be prevented from folding over the back, this method leaves but little to be desired; the pin of course should be put through the centre of the mesothorax, avoiding the scutellum. In conclusion I beg to thank all those entomologists who have so kindly assisted by sending their insects for examination; especially are my thanks due to Mr. E. A. Fitch, not only for insects, but advice and the kind assistance he has always rendered me in every way in his power.

ICHNEUMONIDÆ.

ICHNEUMONIDES OXYPYGI.

Ichneumon sanguinator, Rossi.

This insect, which appears in Desvignes' 'Catalogue of Brit. Ich.,' p. 29, was placed by Marshall in his Catalogue of 1872 as a *Phygadeuon*, which is a mistake. *I. sanguinator*, Rossi, if this be the same species as *I. ruficollis*, Stephens, is a very distinct insect from *Cryptus sanguinator*, Desvignes: this Ichneumon has been taken in some numbers by Mr. Billups at Headly

Lane; when I first saw it I thought it was a variety of *I. erythræus*, but there is no doubt it is distinct from that insect. I thought it was the same species Wesmael described in his 'Tentamen,' p. 102, as *I. discrepator*. Mr. Billups had only taken the female; but Dr. Capron has since sent me a male Ichneumon for my opinion, which certainly is the male of *I. discrepator*, and this strengthens my belief that the female also belongs to the same species; so the synonymy of this species appears to be—

Ichneumon sanguinator, Rossi, Mant. ii., app., n. 85;
Gr., I. E. iii., 918, ♀.

I. ruficollis, Steph., Ill., Mand., vii., 207.

I. discrepator, Wesm., Tent. 102, ♂, ♀.

Mr. Fitch saw a series of this insect in the British Museum, and called my attention to it; to him my thanks are due for the correction of the error.

ICHNEUMONIDES PNEUSTICI.

Gnathoxys marginellus, Wesm.

Ichneumon marginellus, Gr., I. E. i., 192, 48, ♂.

Gnathoxys marginellus, Wesm., Tent. 108, ♂; Misc.
57, ♂, ♀; Brischke, D. Ichn. d. Prov. W. u. O.
Preus. 32; Entom. xv. 35.

This genus is new to Britain; one female was taken by Mr. G. C. Bignell at Plymbridge, near Plymouth.

CRYPTIDÆ.

Cryptus palustris, Thoms.

The male *Cryptus*, which I thought might belong to this species, is, I have no doubt, the male of *Cryptus ornatus*, Gr., described by Thomson in his 'Opuscula,' p. 506. *Cryptus ornatus* is given by Marshall as a synonym of *C. tricolor*, but Thomson (*l. c.*) makes them separate species, as Gravenhorst did, and the same course is adopted by Brischke.

Hemiteles castaneus, Tasch.

Mr. Bignell has bred two males and one female of this species from *Trichiosoma betuleti*, and as I know no description of the male I now give one.

In structure the head, thorax, and wings are like the female, but the face is covered with glistening white pubescence; the 1st abdominal segment is almost the same shape as in the female, rather narrower at the apex, and there is scarcely a trace of the punctures running into aciculations; the remaining part of the abdomen somewhat cylindrical, tapering but slightly till the 6th segment; 2nd quadrate; gastrocæli very small; 3rd rather wider than long; remainder transverse.

Palpi, a spot on the base of the mandibles, scape beneath, front coxæ and trochanters, extreme apex of middle coxæ, middle trochanters, and part of hind ones, yellow; legs red; hind coxæ, trochanters more or less, and apex of hind tarsi, black; apical joint of front and middle ones the same; stigma and nervures black; base of wings yellow; basal half of 3rd abdominal segment more or less red.

Hemiteles persector, Parfitt.

Ent. Mo. Mag., xviii., p. 184, ♀.

Hemiteles gyrini, Parfitt.

Trans. Devon. Ass. for the Advancement of Science, Literature, and Art, 1881.

Mr. Parfitt kindly sent me this insect to examine, and from that inspection I would add to his description the following details:—

Head and thorax shining, impunctate, covered with longish white glistening hairs; 1st and 2nd joints of the flagellum of the female subequal, not quite four times as long as wide; 23 joints; 14th subquadrate; parapsides sharply impressed; metathorax rather densely pubescent; supero-medial area elongate; sides almost parallel, the transverse line dividing the lateral area only about one-third from the front part of the metathorax; 1st abdominal segment of female gradually tapering, about twice as wide at the apex as at the base; in the male almost linear, canaliculated; spiracles distinct, hardly so in the male, placed just beyond the middle; the whole abdomen sparingly covered with glistening hairs, shining, no sculpture except the hair-pits; 2nd segment rather longer than wide; 3rd slightly transverse; in the male the 2nd is one-third longer than wide; the 3rd quadrate.

The female in shape is very similar to *H. formosus*, but the 1st segment is shorter and stouter; the male at first sight resembles the male of *Orthopelma luteolator*, but is more slender.

I have taken two males of this very distinct *Hemiteles* at Brundall, Norfolk.

Nematopodius ater, Brischke.

Brischke, D. Ichn. d. Prov. W. u. O. Preus. 7, ♂, ♀.

Dr. Capron sent me a pair of this insect, which I was unable to find described until I saw the third part of Brischke's Monograph.

I took the male close to Norwich towards the end of May, 1881.

Thaumatotypus Billupsii, n. s.

Piceous. Antennæ like *Pezomachus*; 1st joint of flagellum one-third longer than the 2nd, rather more than three times as long as wide; 5th a little longer than wide, 15-jointed, the apical one conic, one-half longer than wide; head subglobose; eyes small; thorax with a distinct scutellum; meso- and metathorax subequal, hardly as long as wide; a deep rounded depression reaching well up on to the upper part of the metathorax, with indistinct lateral spines; wings wanting; 1st segment of abdomen rather long, almost linear, slightly tapering towards the apex; tubercles very prominent, placed just behind the middle; post-petiole aciculate; 2nd segment very long; aculeus hardly half the length of the 1st abdominal segment; legs slender.

Piceous; base of 1st joint of flagellum pale, abdomen slightly paler piceous; legs piceo-stramineous. Female. Length about 2 mm.

Taken by Mr. T. R. Billups, after whom I have named it, at Burford Bridge, in September, 1881.

Dr. Capron has also taken a specimen of this same genus, but as I have not seen it I cannot say if the same species.

This genus is one of Foerster's (Synopsis d. Fam. u. Gatt. d. Ichneumon), and its characteristics are: aculeus not half the length of the 1st abdominal segment, and

the 2nd segment very large. Although Foerster made the genus, I am not aware that he has described any species of it. Brischke has described one (*T. femoralis*).

Aptesis Foersteri, n. s.

Rufus; capite, metathorace, abdomineque, segmento 1° ex parte, 5—7, nigro. Antennis rufo-fuscis, basi rufis.

Head subquadrate; antennæ a little shorter than the body; basal joints of flagellum cylindrical, elongate; 1st joint about four times as long as wide; 2nd a trifle shorter; the remainder decreasing gradually to the apex; head much wider than the thorax. Thorax rather narrow, somewhat elongate; metathorax rather shorter than the mesothorax; metathorax without areæ, but a distinct posterior transverse line, the slanting part with postero-medial area decidedly, though somewhat feebly, defined. Abdomen elongate, ovate, much wider than the thorax, nearly twice as wide; apex of 2nd segment the widest part; 3rd, 4th, and base of 5th the same width; all the segments, except the 1st, transverse, this narrow, about twice as wide at the apex as at the base, tapering; tubercles distinct, rather more than twice as long as the width of the apex; aculeus a little longer than the 1st segment, or about one quarter the length of the abdomen. Wings reaching beyond the metathorax.

Head black; mouth reddish; antennæ reddish brown, first three joints pale red; thorax red; metathorax black. Abdomen red; 1st segment brownish in the greater part of the middle; 5th and following segments dark brown; aculeus red; apical one-third brown; legs red; apex of hind femora stained with brown; apical joints of all the tarsi blackish; wings with a faint smoky spot in the region of the stigma, and a similar coloured band between this and the base. Long. 3·5 mm.

One female. Brundall, Norfolk, on September 15th, 1881; by sweeping.

I have put this insect in Foerster's genus *Aptesis*, although it differs from some of his characters. Of this genus he says the joints of the antennæ are short and stout, but in this insect they are just the reverse; he also says the antennæ are always tricoloured, but in a note, except in *A. hemiptera* when they are bicoloured, as in my insect; the antennæ are more like *Agrothereutes*, but the 4th joint of hind tarsi is not notched at the apex as in that genus.

Pezomachus anthracinus, Foerst.

A small Ichneumon-like insect; is not uncommon in this country; although in form it has all the appearance of a small *Dicelotus*, the wings are those of *Hemiteles*. This insect, after a deal of trouble, Mr. Fitch found in the British Museum, in the collection of Ruthe, standing under the name of *Ichneumon gracillimus*, most likely only a manuscript name.

In a box of ichneumons, chiefly bred specimens, which Mr. Fitch sent me to look over, was the above insect, together with three females bred from *Elachista subnigrella*; and as I have not seen a description of the male, I have given it below.

Nigra, pedibus ochraceis, femoribus et tibiis posticis apice pallide piceo; abdomine piceo, segmentis anticis marginibus pallide; areola nulla.

Head subglobose; face prominent; clypeus separated from the face by a distinct line, with a circular pit at each lateral margin; mandibles bidentate; teeth subequal; antennæ two-thirds the length of the insect; flagellum subclavate; 1st joint rather more than twice as long as wide; the 2nd one-third shorter than the 1st; head and thorax finely reticulate; parapsides faintly marked in front; metathorax rugose; supero-medial area not distinct, somewhat semi-oval; lateral areae not divided; spiracles small and circular; neuration of the wings very imperfect beyond the outer transverse cubital nervure; radial cell short and deep; legs moderate; 1st segment of abdomen slightly and gradually tapering, no tubercles, aciculate-punctate, rather wider than deep; 2nd and following densely punctured, on the 2nd the puncture flowing into aciculations, the remainder by degrees less coarsely punctured; apical segments almost smooth; the thyridii distinct, transverse and very large; styles distinctly projecting.

Black; mandibles and palpi pale ochreous; legs the same colour; front and intermediate coxæ and all the trochanters yellow; hind coxæ black; posterior part of intermediate femora, apical half of hind femora, apex of hind tibiæ, and apical joints of tarsi, more or less piceous. Abdomen piceous; extreme margins of anterior segments yellowish. Stigma and nervures pale piceous; tegulæ yellow. Length about 3 mm. Male.

Pezomachus dubitator, Foerst.

Foerst., Mon. d. Gat. Pez. 159, 105, ♀ .

A *Pezomachus*, which I believe to be this species, does not appear to be scarce in the neighbourhood of Norwich.

Pezomachus xylochophilus, Foerst.

Foerst., Mon. d. Gat. Pez. 137, 75, ♀ .

I have taken this handsome insect by sweeping on the Brundall marshes in the neighbourhood of Norwich. I have also this summer received it from Mr. T. R. Billups, who took it at Rainham, Essex; and Mr. G. C. Bignell, from the neighbourhood of Plymouth.

Pezomachus analis, Foerst.

Foerst., Mon. d. Gat. Pez. 138, 76, ♀ .

Not uncommon in the neighbourhood of Norwich. Mr. Bignell has sent the same species.

Pezomachus geochares, Foerst.

Foerst., Mon. d. Gat. Pez. 199, 158.

Mr. Billups has taken, at Deal, on the 18th April, 1881, a *Pezomachus* which I believe to be this species; it differs only from Foerster's description in having the 3rd abdominal segment black, and red only at the sides.

OPHIONIDÆ.

In the autumn I examined my species of *Campoplex* by the light of Foerster's and Holmgren's Monographs (Verhand. d. k.-k. zool.-bot. Ges. in Wien. 1868, B. xviii, Heft. iii. u. iv.; Mon. d. Gatt. *Campoplex*, Gr. von Prof. Dr. Förster; Holm., Skand. ant. af. Ophionidslägtet *Campoplex*; Bih. till. k. Sv. vet. ak. hand. Band. 1, no. 2), when, as might naturally be expected, I found some of their species amongst my specimens, and I have little doubt but that many others still remain unnoticed in this country.

Campoplex oxyacanthæ, Boie.

Campoplex oxyacanthæ, Boie, Stett. Ent. Zeit., 16 Jahrg., 104, 43.

C. mixtus, Gr., I. E. iii., 601, part; Holm., Mon. Oph. Suec. 33, part.

C. mesoxanthus, Foerst., l. c., 791, 12, ♂, ♀.

C. oxyacanthæ, Holm., l. c., 60.

Campoplex falcator, Thunb.

Ichneumon falcator, Thunb., Ichn., 265.

Campoplex mixtus, Gr., I. E. iii., 601, 101, ♂, ♀, part; Holm., Mon. Oph. Suec., 33, 1, part; Foerst., l. c., 863, 67, ♂, ♀; Holm., Sk. art. af. Oph. Camp. 58, 23, ♂, ♀.

Campoplex obreptans, Foerst.

Foerst., l. c., 778, 2, ♀; Holm., l. c., 79, 36, ♂, ♀.

Campoplex confusus, Foerst.

Foerst., l. c., 341, 50, ♂, ♀; Holm., l. c., 62, 27, ♂, ♀.

Campoplex erythrogaster, Foerst.

Foerst., l. c., 836, 46, ♂, ♀; Holm., l. c., 56, 22, ♀.

Campoplex terebrator, Foerst.

Foerst., l. c., 810, 26 and 27, ♂, ♀; Holm., 34, 10, ♂, ♀.

Cymodusa flavipes, Brischke.

Brischke, D. Ichn. d. Prov. W. u. O. Preus. 37, ♂.

This species appears to be generally distributed in England. I have taken it at Wimbledon; Dr. Capron takes it in the neighbourhood of Guildford; and I have also received it from Mr. Fitch. They have all been males, and I have seen no female which was at all likely to belong to it.

Sagaritis zonata, Gr.

Under this head Holmgren, in Mon. Oph. Suec., has included *Campoplex latrator* as a doubtful synonym; Tschek, in Ich. Frag., separates them, which view is also taken by Brischke. Both species occur in this country.

Limneria virginalis, Gr.

Gr. I. E. iii., 472, ♀.

I have taken a *Limneria* in the neighbourhood of Norwich, which I have no doubt is this species; the head behind the eyes is narrow; transverse anal nervure is not interrupted; the supero-medial area of metathorax transverse; lateral areae not divided; 2nd abdominal segment one-third longer than wide; 3rd subquadrate, or a little longer than wide. I have also taken a second specimen at Wimbledon, in which the post-petiole is not so square as the other, and the front coxæ are partly yellow. Another female has the post petiole as the last, and the supero-medial area not so wide; the front coxæ are also partly pale. These two latter may belong to another species.

Limneria clandestina, Holm.

Holm., Mon. Oph. Suec. 90, 64, ♂, ♀.

To this species I refer a *Limneria* sent to me by Mr. Fitch, which was in a large box formerly belonging to the Rev. T. A. Marshall, given to him by Mr. E. Saunders.

Limneria hyalinata, Holm.

Holm., l. c., 93, 69, ♂, ♀.

Mr. J. E. Fletcher has bred both sexes of a *Limneria*, which I believe to be this species, from *Cræsus varus*.

Limneria litoralis, Holm.

Holm., l. c., 69, 29, ♂, ♀.

Taken by Mr. T. R. Billups at Woking, August 1st, 1881.

Limneria concinna, Holm.

Holm., l. c., 84, 55, ♂, ♀.

I have taken this pretty and very distinct species in the neighbourhood of Norwich; it has also been taken by Mr. G. C. Bignell near Plymouth.

Limneria canaliculata, Gr.

Gr., I. E. iii., 560, ♀.

Mr. D. Wheeler gave me a specimen of this *Limneria*, which he bred from larvæ brought from Wicken Fen, but as several species were mixed together, he could not say which was the host.

Head rather broad behind the eyes, scarcely narrowed; face transverse; transverse anal nervure not interrupted; supero-medial area subcordiform, not closed behind; lateral areæ not divided; 2nd abdominal segment one-third longer than wide; 3rd longer than wide.

Limneria Kriechbaumeri, n. s.

Pedibus rufis, coxis trochanteribusque nigris, metathorace brevissimo, aculeo longitudine tertiæ partis abdominis.

Head transverse, narrow behind the eyes; face densely pubescent; face quadrate; eyes slightly emarginate against the antennæ; mandibular teeth equal; thorax higher than long; metathorax very short, with no upper face, forming an inclined plane from the post-scutellum to the base of the petiole, like the rest of the thorax, reticulate, no trace of areæ, with glistening white hairs; 1st segment of abdomen almost straight; petiole slender; post-petiole longer than wide, more slender in the male than in the female, in the latter about twice and in the male one and a half times as wide as the petiole; the 2nd segment longer than wide; the 3rd and remainder transverse; apex of abdomen slightly compressed; aculeus of female about one-third the length of the abdomen. Areolet subsessile; recurrent nervure received just beyond the middle; cubital nervure without areolet; transverse anal nervure divided far below the middle, but without nervure running from the geniculation; claws of tarsi simple; apical joint of hind tarsi longer than the 4th.

Black; palpi and mandibles, except the teeth, yellow; legs red; coxæ and trochanters black; extreme base of tibiæ yellow; apex of hind tarsi somewhat fuscous, as well as apical joint of intermediate ones sometimes; stigma and nervures fuscous; base of wings yellow. Long., male and female, 5—7 mm.

Bred by Mr. G. C. Bignell, April 20th, 1882, from half-grown larvæ of *Teniocampa instabilis*.

This insect may be said to belong as much to *Casinaria* as to *Limneria*, being without metathoracic areæ, and the inner orbits scarcely emarginate; but the aculeus is longer than in any *Casinaria* I can find described. The cocoon is chocolate, with central whity-brown zone.

Limneria rufa, n. s.

Abdomine pedibusque, maxima ex parte rufis.

Head transverse, narrow behind the eyes; antennæ rather more than two-thirds the length of the body; eyes rather deeply emarginate against the antennæ; forehead without keel or groove. Thorax slightly longer than high, rather coarsely punctured; parapsides slightly defined; the depression behind the anterior margin of the mesopleura bounded by a fine distinct line; mesopleura with scattered punctures; interstices reticulate; scutellum keeled only at the base; supero-medial area of metathorax distinct, transverse, open behind; lateral areæ divided; postero-medial almost flat, with indistinct concavity; spiracles oval. Abdomen compressed; post-petiole about twice as wide as the petiole, rather longer than wide; petiole a trifle longer than the post-petiole; the abdomen hardly compressed. Areolet with a short petiole; recurrent nervure received just beyond the middle; transverse anal not divided; transverse discoidal divided below the middle; aculeus of female hardly exerted.

Black; palpi yellow. Legs red; coxæ, trochanters, apex of front tarsi, middle and hind tarsi, fuscous; hind tibiæ more or less fuscous-red; extreme base of all the tibiæ with a minute white spot above in the male, obsolete in the female; tegulæ white; nervures and stigma black. Abdomen red; petiole brown; sides of petiole and 2nd segment slightly fuscous; anterior half of venter fuscous. Long., male and female, 9 mm.

Bred by Mr. G. C. Bignell from *Bombyx quercus*. The Ichneumon larvæ emerged from the living caterpillars. The cocoon is oval, black, and granulated on the outside.

Limneria Brischkei, n. s.

Nigra, pedibus rufis, coxis, trochanteribus et tarsis posticis nigris, aculeo brevissimo.

Head not buccated, narrow behind the eyes; face almost parallel; eyes hardly emarginate against the antennæ, a little shorter than the body; head and thorax with scattered white pubescence; 1st joint of flagellum about four times as long as wide, longer than the 2nd; thorax longer than high; area of metathorax not distinct, and rather imperfect; supero-medial about as long as wide; lateral area not divided; postero-medial coffin-shaped; metathorax rather densely pubescent, especially at the sides; 1st segment of abdomen slender; post-petiole about twice the width of the petiole, longer than wide; spiracles distinct; 2nd segment one-third longer than wide; 3rd slightly wider than long; sides of abdomen with glistening white hairs; aculeus about one-third the length of the 1st segment. Wing with areolet hardly petiolated; recurrent nervure received just beyond the middle; cubital nervure with no nervelet; external radial nervure somewhat straight; transverse anal nervure not divided. Legs red; greater part of front coxæ, middle and hind coxæ, entirely black; extreme base and apex of hind tibiæ, hind tarsi, and apex of middle one, fuscous; mouth, front and middle trochanters, and base of wings, yellow. Stigma and nervures black. Long. female, 6 mm.

Bred by Mr. Bignell from *N. triangulum*; it appears to differ from its allies in having the post-petiole slender. It comes near *L. dumeticola*, Holm., and *L. carbonaria*, Brischke.

The cocoon is rough dirty white, with no dark zones.

Limneria affinis, Parfitt.

Ent. Mo. Mag. xviii. 252.

Meloboris pusio, Holm.

Holm., Mon. Oph. Suec. 100, 2, ♀.

Amongst some ichneumons sent to me by Mr. Fitch, given him by Mr. E. Saunders, and which were formerly in the possession of the Rev. T. A. Marshall, I detected

a female and two males which I believe to belong to this species. *Meloboris* was the only one of Holmgren's genera of the *Limneria* group which had not been met with in this country; I was therefore very pleased to see it.

Mesochorus fuscicornis, Brischke.

Brischke, D. Ichn. d. Prov. W. u. O. Preus. 78, ♂, ♀.

I have bred both sexes of a *Mesochorus* from the cocoons of a *Microgaster*, which agrees exactly with Brischke's description of the above. It has also been bred by Mr. Bignell from *Apanteles nothus*, out of *A. grossulariata*, and *M. galiata*.

Mesochorus formosus, n. s.

Capite maxima, ex parte stramineo (♂) aut piceo (♀); abdomine macula media, pedibusque stramineis, tibiis posticis basi et apice nigris; stigmatibus albo; abdomine segmento primo apice aciculato.

Face quadrate; mandibular teeth subequal; apex of clypeus rounded, not separated from the face; antennæ rather longer than the body; 1st joint of flagellum about one-half longer than the 2nd, and about six times as long as wide; no joint quadrate. Thorax smooth, with very fine somewhat scattered pubescence; supero-medial area elongate, sides slightly curved outwards; abdomen slender; 1st segment rather longer than the hind coxæ and trochanters, aciculate at the apex, aciculations somewhat irregular; 2nd segment a little longer than wide; 3rd as long as wide; apex of the 2nd the widest part; apex of 3rd much narrower than the base; from here to the apex of the abdomen decidedly compressed. Transverse ordinary nervure interstitial; transverse anal not interrupted; recurrent nervure received before the middle of the areolet.

Male. Head and thorax palish straw; apex of teeth, and a small spot just enclosing the ocelli, fuscous; upper part of thorax, except a central blotch, the scutellum and its neighbourhood, fuscous. Abdomen fuscous, with a pale straw blotch extending from the middle of the 2nd segment to the middle of the 3rd; sides of the apex of the abdomen pale piceous; styles straw-coloured. Legs pale straw; extreme apex of hind tibiæ fuscous, the base also very faintly so. Antennæ rufo-fuscous;

scape straw. Stigma and nervures dirty white; the latter rather the darker.

The female differs from the male in having the lower part of the face dusky, and the thorax nearly entirely dark; aculeus about as long as the 1st segment. In this species, as well as *aciculatus*, the aciculations are not so decided as in *complanatus*. Length 3 mm.

Bred by Mr. G. C. Bignell from *Macrocentrus thoracicus*, out of *Noctua triangulum*, and out of *X. rhizolitha*.

The colour of the stigma easily separates this from *M. aciculatus*.

Plectiscus spilotus, Foerst.

Foerst., Ueb. d. Gatt. u. Art. d. Fam d. Plectis. 90, ♂; Brischke, D. Ichn. d. Prov. W. u. O. Preus. 94, ♂?

I have taken two males at the end of May and middle of June close to Norwich.

TRYPHONIDÆ.

Mesoleptus antilope, Gr.

This, Brischke says, is a *Catoglyptus*, and perhaps equal to *C. pulchricornis*, Holm., which latter has been taken by Dr. Capron, and previously recorded.

Mesoleptus leucostomus, Gr.

This he places in the genus *Trematopygus*.

Mesoleptus vulneratus, Zett.

Tryphon vulneratus, Zett., Ins. Lapp. 387, 18, ♂.

Mesoleptus vulneratus, Holm., Mon. Try. Suec. 102, 6, ♂, ♀; Brischke, l. c., 66, ♀.

I have received both sexes of this species from Mr. Cameron; they have "Thornhill" attached to them, so were probably captured by Dr. Sharp.

Mesoleptus similis, Brischke.

Brischke, D. Ichn. d. Prov. W. u. O. Preus. 96, ♂, ♀.

A male of this species was taken last year by Mr. G. C. Bignell in the neighbourhood of Plymouth.

Notopygus emarginatus, Holm.

Holm., Mon. Try. Suec. 115, 1, ♂, ♀.

Mr. P. Cameron has taken this species at Kingussie.

Perilissus Gorskii, Ratz.

Tryphon Gorskii, Ratz., Ich. d. Forst. iii., 127, 42, ♂.

Perilissus Gorskii, Holm., Mon. Try. Suec. 125, 10, ♂;

Brischke, D. Ichn. d. Prov. W. u. O. Preus.

73, ♂, ♀.

Mr. J. E. Fletcher has bred this species from *Phyllostoma vagans*. I have taken it in the neighbourhood of Norwich.

Mesoleius difformis, Holm. ?

Holm., Disp. Syn. Mesol. Scand. 24, 59, ♀.

A *Mesoleius* bred by Mr. J. E. Fletcher agrees with this species, except that the transverse ordinary nervure is not interstitial; it was parasitic on *Cladius Brullæi*.

Mesoleius molestus, Holm. ?

Holm., Mon. Try. Suec. 147, 39, ♂, ♀.

I have a male *Mesoleius*, given to me by Dr. Capron, taken at Shere, and have seen the same species from Mr. G. C. Bignell, which agrees better with *M. molestus* than any other I can find described; but Holmgren says transverse anal nervure divided below the middle; but in those I have seen it is divided either in or just above the middle.

Mesoleius ignarus, Holm.

Holm., Mon. Try. Suec. 174, 103, ♂, ♀.

I have seen a male from Mr. Cameron, which I believe to be this species.

Mesoleius pini, n. s.

Thorace, pectore, scutelloque, flavo maculato; abdomine dorso medio rufo; pedibus rufis, tibiis tarsisque posticis fuscis, coxis anticis flavis.

♂. Black; mouth, clypeus, apex of cheeks, spot on scape beneath, upper margin of collar, triangular blotch

on shoulders, tubercles and tegulæ, lower part of prothorax, breast, this latter with a brown lateral spot, sutures between the meso- and metathorax, lateral basal margins of scutellum, post-scutellum faintly, front coxæ, and a spot on intermediate ones beneath, yellow; legs red; hind knees, tarsi, and tibiæ fuscous; the latter faintly reddish towards the base; apex of intermediate tarsi fuscous; middle of abdomen faintly reddish; apex of 2nd and remaining segments with a narrow pale margin; stigma reddish brown.

♀. Hardly differs from the male. My specimen has the post-scutellum yellow-marked, the marks on the scutellum larger, and the brown spots on the breast replaced by red ones; the coxæ more yellow, this colour extending to the hind pair; the prothorax is almost entirely yellow.

Head not buccated, slightly narrowed behind the eyes; apex of clypeus sinuous; mesopleura reticulate, with fine scattered punctures; supero-medial area of female distinct, less so in the male; postero-medial the same; keels on the 1st abdominal segment of the male distinct, extending just beyond the middle, obsolete in the female, the segment half as wide at the base as at the apex, and one-half longer than wide; 2nd in male quadrate, female transverse; the 3rd in male and female longer than wide; parapsides of mesothorax distinct. Areolet transverse, more or less petiolated; transverse anal nervure subopposite, interrupted a little below the middle.

This insect should come next of *M. sylvarum*, Holm., Disp. Syn. Mesol. Scand. 10, 19.

M. sylvarum has the coxæ black-marked, and mesopleura black; in this the latter is yellow, and the coxæ are red and yellow.

Bred by Mr. J. E. Fletcher from cocoons of *Lophyrus pini*, sent by Mr. Cameron from Scotland.

Trematopygus atratus, Holm.

Holm., Mon. Try. Suec. 181, 4, ♂; Brischke, *l. c.*, 90, ♂, ♀.

This fine species has been taken, and bred from *Cræsus septentrionalis*, by Mr. Wilson at York.

Brischke has placed *Tryphon albipes* in this genus; Marshall placed it in his Catalogue as a doubtful *Tryphon*.

Tryphon confinis, Holm.

Holm., Mon. Try. Succ. 191, 17, ♂.

I have taken a male *Tryphon*, which agrees with this species, at Brundall, near Norwich.

Besides the above-mentioned *Tryphon*, the following Gravenhorstian species, included in Marshall's Catalogue, Brischke has moved into the following genera of Holmgren:—

T. alborinctus is a *Polyblastus*.

T. colon is a *Mesolecius*.

T. fasciatus is an *Erromenus*.

T. notatus is an *Euryproctus*.

T. xanthostomus is a *Mesolecius*.

Grypocentrus incisulus, Ruthe.

Ruthe, Stett. Ent. Zeit. Jahrg. xvi., 55, 2; Holm., Mon. Try. Succ. 194, 2, ♂, ♀; Brischke, l. c., 94, ♂, ♀.

I captured a specimen of this species near Norwich on the 11th of August, 1877, but did not succeed in naming it till this winter.

Grypocentrus clypeatus, Zett. ?

Tryphon clypeatus, Zett., Ins. Lapp. 399, 30, ♀.

Grypocentrus clypeatus, Holm., l. c., 195, 5, ♂, ♀.

I have an insect which I believe to be this species; it was taken close to Norwich on the 9th of June, 1878.

Monoblastus Neustriæ, Ratz.

Tryphon Neustriæ, Ratz., Ich. d. Forst. ii. 115, 16, ♂.

Monoblastus femoralis, Holm., Mon. Try. Succ. 293, 2, ♂, ♀.

M. Neustriæ, Holm., l. c., 385, 2, ♂, ♀; Brischke, l. c., 96, ♂, ♀.

I have seen two specimens which were taken by Mr. Billups in his garden at Peckham.

Monoblastus Caproni, n. s.

Facie flava, abdominis medio rufo, pedibus nigris, tibiis, trochanteribus, genibus tarsisque anticis pallide flavis.

Head behind the eyes not or scarcely narrow; antennæ a little shorter than the body; clypeus separated from the face, sometimes obsoletely so; face wider below than above; a channel running from the anterior ocellus to the antennæ; head finely punctate. Thorax finely punctate; scutellum keeled at the sides to the middle; mesothorax somewhat trilobed in front; supero-medial area elongate; lateral area only partially divided; 1st segment of abdomen rather more than twice as long as wide, longer than the hinder coxæ and trochanters, about twice as wide at the apex as at the base, channelled to just beyond the middle; tubercles not prominent, placed about in the centre; 2nd and 3rd segments quadrate, the 3rd sometimes subquadrate, remainder transverse; the anterior segments somewhat coarsely punctate. Wings with an areolet, petiolated; transverse outer nervure partially obliterated; transverse ordinary nervure not interstitial; transverse anal interrupted below the middle; external radial slightly incurved in the middle. Claws distinctly and closely pectinated.

Black; scape beneath sometimes, mouth, middle of mandibles, clypeus, face, spot on cheeks below the eyes, this sometimes united with the face, front and middle coxæ and trochanters, yellow; 2nd to 4th abdominal segments red; the 2nd with two dorsal spots below the base, sometimes united into a blotch; apex of 1st segment sometimes reddish; femora black; front and middle trochanters, knees, tibiæ, and tarsi dirty yellowish white; extreme apex of hind trochanters the same colour; hind legs black; middle of tibiæ or beneath more or less pale. Stigma and nervures black; base of wings pale. Length 6·5—9 mm., male.

Taken by Dr. Capron in the neighbourhood of Shere.

This distinct *Polyblastus*, in shape, is very like the *Tryphon rutilator* group, but the heavily pectinated claws easily distinguish it from any of the true *Tryphons*.

Polyblastus Bridgmani, Parfitt.

Ent. Mo. Mag. xviii. 251.

Cteniscus hostilis, Holm.

Holm., Mon. Try. Suec. 239, 32, ♂.

I have taken a male in the neighbourhood of Norwich at the end of May, and another in the beginning of June, at Brundall; both these agree exactly with Holmgren's description of this species.

Cteniscus bimaculatus, Holm.

Holm., Mon. Try. Suec. 245, 47, ♂, ♀.

I took both sexes of this insect last autumn at Brundall, near Norwich.

Exochus septentrionalis, Holm. ?

Holm., Disp. Met. Exoch. Scand. 72, 19, ♀.

Amongst Mr. Cameron's insects I found an *Exochus* which agrees with the description of this species in every respect, except the colour of the legs; these have the femora red, with the extreme apex black; the front tibiæ are red, the extreme ends black; front tarsi reddish, apex black; intermediate tarsi nigro-fuscous; the coxæ and trochanters are reddish brown, the latter red at the apex. It may be the male of this species.

Two males. Clober and Cadder.

Exochus albicinctus, Holm.

Holm., l. c., 71, 17, ♂.

I have taken two specimens of this insect in June and July, 1881; the first, a male, was taken at Felthorpe, in Norfolk; the other, at Wimbledon, in Surrey, is a female, and only differs from the male and Holmgren's description in having the middle and hind tibiæ black; extreme base whitish.

Exochus decorator, Holm.

Holm., l. c., 64, 3, ♂.

This species was sent to me by Mr. J. E. Fletcher, who received it from Mr. J. H. Threlfall, of Preston.

Hyperacmus crassicornis, Gr.*Exochus crassicornis*, Gr., I. E. ii. 347, 221, ♀.*Hyperacmus crassicornis*, Holm., Mon. Try. Suec. 322, ♀; Brischke, D. Ichn. d. Prov. W. u. O. Preus. 108, ♂, ♀.

This species has been taken by Dr. Capron in the neighbourhood of Shere during the past summer.

Bassus Holmgreni, n. s.

Abdominis medio, pedibus, antennisque rufis, trochanteribus, coxisque anticis flavis posticis nigris, facie et genis ♂, clypeo et orbitis internis ♀, flavis.

Head shining, finely punctured, narrow behind the eyes; thorax very shining; punctures almost obsolete; metathorax wrinkled; supero-medial area distinct, rather narrower in front than behind; 1st abdominal segment and base of 2nd rather coarsely scabrous; remainder obsoletely punctured; 1st segment of female rather longer than wide, slightly tapering from base to apex, grooved to beyond the middle; tubercles not distinct; 2nd and following segments transverse; 3rd the widest, slightly compressed at the apex; 1st segment of the male one-third longer than wide; the widest part of the abdomen the 4th and 5th segments. Wings without an areolet; transverse cubital nervure short; transverse anal nervure divided in or just below the middle. Legs slender.

♀. Black; antennæ red, scape beneath, black above; mouth, clypeus, a small spot just above the base of the mandibles and internal orbits, coxæ, trochanters, base of wings, and tubercles, yellow; apex of 1st segment, 2nd to 4th entirely, 5th except fuscous dorsal spot, and legs, red; base of hind ones faintly fuscous; hind coxæ, greater part and apical joint of all the tarsi, dark brown or black; stigma brown; apex yellowish; nervures brown.

♂. Only differs in having the antennæ reddish brown, scape black, apex beneath yellow; mouth, front part of cheeks, face, and inner orbits just above the antennæ, yellow; base of 2nd segment dark brown, and 5th segment almost entirely red. Length 4·5—5 mm.

This beautiful little *Bassus* belongs to Holmgren's div. ii. B. b. a.

I took the male at the end of June and the female at the beginning of July in Norfolk. I have also seen male and female taken by Mr. J. W. May at Esher on 28th July, 1880.

PIMPLIDÆ.

Clistopyga rufator, Holm.

Holm., Mon. Pimp. Suec. 35, ♂, ♀; Voll., Pinacog., pl. 13, fig. 7; Brischke, D. Ichn. d. Prov. W. u. O. Preus. (Schrif. d. Nat. Ges. i. Danz., Bd. v., Heft. 1, 8), ♀.

I took a female of this splendid insect at Brundall, June 3rd, 1881.

Lycorina triangulifera, Holm.

Holm., Mon. Pimp. Suec. 43, ♂, ♀.

This fine addition to our fauna was captured by Mr. G. C. Bignell in the neighbourhood of Plymouth.

Lissonota anomala, Holm.?

Holm., Mon. Pimp. Suec. 52, 11, ♀.

A specimen of this genus, taken by Mr. T. R. Billups at Wickham, comes very near to *L. anomala*, Holm., but differs from the description of that species in having the 2nd and 3rd abdominal segments rather longer than wide, and the transverse anal nervure is divided distinctly below the middle; wings hyaline; nervures black. This insect may be a variety of the above species, as Holmgren's description was taken from a single specimen.

Lissonota linearis, Gr.?

Gr., I. E. iii. 105, 59, ♀.

Mr. Billups has taken a female which agrees with this species of Gravenhorst, except that the 2nd segment is red, and the aculeus as long as the abdomen.

Head transverse, behind the eyes narrow; 1st abdominal segment with a canalicula terminating in an oblong pit in the middle of the post-petiole; the 2nd and 3rd segments rather longer than wide; remainder transverse; transverse anal nervure divided one-third from the bottom; external radial nervure slightly incurved. Stigma rather paler at the base; face parallel.

This species Mr. Marshall has placed in his Catalogue as a synonym of *L. bellator*, but Mr. Billups's specimens differs from *L. bellator* in having the punctures on the back of the mesothorax rather larger and more scattered, aculeus is shorter, face and thorax entirely black.

Lissonota deversor, Gr.

Gr., I. E. iii. 59, 32, ♂, ♀.

In Marshall's Catalogue this insect is included as a synonym of *L. irrisoria*. I think this must be a mistake; the description of the two insects are so very different. I have taken six males, and the only variation seems to be in the two central pale lines on the face, which are sometimes absent. I am inclined to think the *L. leptogaster*, Holm., is this latter variety. I once sent this insect to Mr. Marshall, and he returned it as a *Mesoleptus* which he could not name; the narrow 1st abdominal segment certainly gives it at first sight a right to a place in that genus.

Lissonota femorata, Holm.

Holm., Mon. Pimp. Suec. 55, 20, ♀.

I have taken three females in this neighbourhood which agree exactly with Holmgren's description.

Lissonota Fletcheri, n. s.

Niger, abdominis medio, femoribus, tibiis tarsisque rufis; abdominis primo segmento subaciculato.

Head transverse, slightly narrowed behind the eyes; antennæ of male rather shorter than the body, of female rather more than half the length of the body; 1st joint of flagellum rather longer than the 2nd, about three times as long as wide; cheeks slightly descending below the base of the mandibles; lower part of face and cheeks covered with fine dense white pubescence; face transverse; head, thorax, and abdomen finely and densely punctured; interstices reticulate; 1st segment of abdomen about as long as the hind coxæ, gradually tapering from base to apex, this latter about twice as wide as the base; apical portion distinctly but finely aciculate; 2nd segment quadrate; 3rd and following ones transverse; aculeus as long as the abdomen.

Areolet of wings small, petiolated; the petiole as long as the height of the areolet; transverse ordinary nervure not interstitial; transverse discoidal divided below the middle; transverse anal indistinctly divided less than one-third from the bottom.

Black; femora, tibiæ, tarsi, abdominal segments 2nd to 4th, apex of 1st and base of 5th, red; base of wings yellow; stigma fuscous. Male and female. Length 6.5 mm.

Bred from *Gelechia lentiginosella* by Mr. J. E. Fletcher, of Worcester.